DATA VALIDATION REPORT

Gold King Mine Release Incident

SAMPLE DELIVERY GROUP: 680-117013-5

Prepared by

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I. INTRODUCTION

Task Order Title:	Gold King Mine Release Incident
Project No.:	20408.012.001.0274.00 20408.012.001.0267.00
Sample Delivery Group:	680-117013-5
EPA Project Manager:	Steve Way
Weston Project Manager:	Dave Robinson
TDD No.:	0001/1508-04
Matrix:	Water
QC Level:	Stage 2A
No. of Samples:	2
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica- Savannah

Revision 1 reflects the name change back to CC06_092115_1300.

Table 1. Sample Identification

Location ID	*Lab Sample Name*	*Matrix Type*	*Collection Date*	*Method*
CC06_092115_1300	680-117013-3	Water	9/21/15 1:00 PM	300.0, SM 3500 CR D, 351.2, 6010C, 7470A, 8082A, 4500 CN E-2011, 4500 NH3 G-2011, SM6200B
Trip Blank	680-117013-4	Water	9/21/15 1:00 PM	SM 6200B

II. Sample Management

Anomalies regarding sample management are noted below. According to a notation on the chain-of-custody (COC), the samples were received within the temperature limits of 4°C ±2°C. The samples were received intact, on ice, and properly preserved. The COC was appropriately signed and dated by field and laboratory personnel. The presence or absence of custody seals on the cooler was not specifically noted.

The following issues were noted:

- The COC listed the sample ID as CC06_09212015_1300; however, the sample was logged as CC06_092115_1300. A revised data package was issued by the laboratory on 9/29/2015 to correct the ID. Subsequently, the identification was changed by the project team and a data package reissued on 10/12/2015.
- The COC appeared to request polychlorinated biphenyls (PCBs) and semivolatile organic compounds (SVOCs), as the line item was listed as PCB/SVOC. The laboratory reported only PCBs in this SDG.
- Dioxins and radionuclide analyses were also requested on the COC. The results of these analyses were not reported in this SDG.
- The Login Sample Receipt Checklist noted the aqueous portion of the sample was not received; however, the reviewer noted the sample reported in this SDG was aqueous.
- Corrections made to the COC were made by overwriting the original entry. The corrections were not initialed or dated.
- The COCs did not list CLP sample IDs, and none were provided. The laboratory logged the samples per the location IDs on the COCs.
- The presence or absence of sample tags was not noted in the case narrative, and sample tags were not listed on the COCs.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
UB	The analyte was detected in the sample and in either the associated laboratory blank or field blank. If detected below the reporting limit (RL) the analyte result was reported as non-detected at the RL due to blank contamination. If detected above the RL, the analyte result was reported as non-detected at the reported result due to blank contamination.	The analyte was detected in the sample and in either the associated laboratory blank or field blank. If detected below the reporting limit (RL) the analyte result was reported as non-detected at the RL due to blank contamination. If detected above the RL, the analyte result was reported as non-detected at the reported result due to blank contamination.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias.
J-	Not applicable	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential negative bias.

Qualifier	Organics	Inorganics
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
UJB	The analyte was detected in the sample and in either the associated laboratory blank or field blank; the analyte result was reported as non-detected at either the RL or the reported result. The reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The analyte was detected in the sample and in either the associated laboratory blank or field blank; the analyte result was reported as non-detected at either the RL or the reported result. The reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995 or calibration was noncompliant.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
L1	LCS/LCSD RPD was outside control limits.	LCS/LCSD RPD was outside control limits.
Q	MS/MSD recovery was poor.	MS recovery was poor.
Q1	MS/MSD RPD was outside control limits.	MS/MSD RPD was outside control limits.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	ICPMS tune was not compliant.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
F1	Field duplicate results were outside the control limit.	Field duplicate results were outside the control limit.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.

Qualifier	Organics	Inorganics
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. Contract Laboratory Program Statement of Work for Inorganic Superfund Methods, 6010C and 7470A—Metals and Mercury

Reviewed By: P. Meeks
Date Reviewed: September 29, 2015

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Inorganic Superfund Methods, EPA Methods 6010C and 7470A*, and the *National Functional Guidelines for Inorganic Superfund Data Review* (2010).

- Holding Times: The analytical holding times, 28 days for mercury and six months for the remaining metals, was met.

- Analytical Method Blanks: There were no detects reported in the method blanks.

- Laboratory Control Samples (LCS): The recoveries were within laboratory control limits of 85-115% for mercury and the method control limits of 80-120% for the remaining analytes.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- Post Digestion Spike (PDS): There were no PDS analyses performed on the sample in this SDG.

- Serial Dilution: There were no serial dilution analyses performed in this SDG.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were identified in this SDG.

- Field Duplicates: No field duplicate samples were identified in this SDG.

B. EPA Method 8082A — Polychlorinated Biphenyls (PCBs)

Reviewed By: P. Meeks
Date Reviewed: September 29, 2015

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Organic Superfund Methods, EPA Method SW-846 8082A,* and the *National Functional Guidelines for Organic Superfund Data Review* (2008).

- Holding Times: The extraction and analytical holding times were met. The water sample was extracted within seven days of collection and analyzed within 40 days of extraction.

- Analytical Method Blanks: The method blank had no target compound detects.

- Laboratory Control Sample (LCS)/LCS Duplicate (LCSD): Recoveries were within laboratory-established QC limits of 44-130% for PCB-1016 and 35-130% for PCB-1260. The RPDs were within the QAPP control limit of ≤20%.

- Surrogate Recovery: Recoveries were within laboratory-established control limits of 40-130% for tetrachloro-m-xylene (TMX) and 14-130% for decachlorobiphenyl (DCB).

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): No MS/MSD analyses were performed on the sample in this SDG. Method accuracy and precision were evaluated based on the LCS/LCSD results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were identified in this SDG.

    - Field Duplicates: There were no field duplicate samples identified in this SDG.

C. Standard Method 6200B — Volatile Organic Compounds (VOCs)

Reviewed By: P. Meeks
Date Reviewed: September 29, 2015

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Organic Superfund Methods, Standard Methods for the Examination of Water and Wastewater Method 6200B,* and the *National Functional Guidelines for Inorganic Superfund Data Review* (2008).

- Holding Times: The preserved aqueous sample was analyzed within 14 days of collection.

- Analytical Method Blanks: The method blank had no target compound detects.

- Laboratory Control Sample (LCS)/LCS Duplicate (LCSD): Due to acceptable but disparate recoveries, the RPD for chloroethane exceeded the laboratory control limit of ≤30%, at 39%; however, as the analyte was not detected in the samples, no qualifications were required. Recoveries and the remaining RPDs were within laboratory-established control limits.

- Surrogate Recovery: The surrogate recoveries were within laboratory-established control limits.

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): No MS/MSD analyses were performed on a sample in this SDG. Method accuracy and precision were evaluated based on the LCS/LCSD results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Trip Blank: Sample Trip Blank was the trip blank associated with the site sample. The trip blank was free from target compound contamination.

    - Field Blanks and Equipment Rinsates: No field blank or equipment rinsate samples were identified in this SDG.

    - Field Duplicates: There were no field duplicate samples identified in this SDG.

D. VARIOUS EPA METHODS—General Chemistry

Reviewed By: P. Meeks
Date Reviewed: September 29, 2015

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015), *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Inorganic Superfund Methods, EPA Methods 300.0 and 351.2, Standard Methods for The examination of Water and Wastewater Methods SM3500 Cr D, 4500 CN E, and 4500 NH3 G*, and the *National Functional Guidelines for Superfund Inorganic Data Review* (2010).

- Holding Times: The sample was received at the laboratory approximately 12 hours beyond the holding time for hexavalent chromium. The sample was analyzed approximately 46 hours beyond the holding time. Nitrate as nitrogen (nitrate-N) and nitrite-N were analyzed approximately 26 hours beyond the holding time; therefore, the results for these analytes (both nondetects) were qualified as estimated (UJ). Although the method holding time for nitrate/nitrite-N is listed as 28-days, the laboratory qualified the result as having exceeded the holding time, indicating the laboratory did not analyze for nitrate/nitrite-N separately, but reported the result as the sum of nitrate-N and nitrite-N. The nondetected result for nitrate/nitrite-N was qualified as estimated (UJ). The remaining holding times, as listed below, were met.

    - Ammonia (4500 MH3 G) – 28 days
    - Total Kjeldahl nitrogen (TKN, 351.2) – 28 days
    - Cyanide (4500 CN E) - 14 days
    - Nitrate/nitrite as nitrogen (nitrate/nitrite-N, 300.0) - 28 days
    - Remaining anions (300.0) – 48 hours
    - Hexavalent chromium (3500 Cr D) - 24 hours

- Analytical Method Blanks: There were no detects in the method blanks.

- Laboratory Control Samples: The anion and TKN recoveries were within the method control limits of 90-110%. The cyanide, ammonia, and TKN recoveries were within the laboratory control limits of 90-110%. Hexavalent chromium was recovered within the laboratory control limits of 85-115%. Anion and ammonia RPDs were within the QAPP control limit of ≤20%.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG. Anion and ammonia method precision was evaluated based on LCS/LCSD results.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses performed on the sample in this SDG. Method accuracy was evaluated based on the LCS results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified in this SDG.

Validated Sample Result Forms: 680-117013-5

Analysis Method 300.0

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Nitrate as N	T	14797-55-8	0.023	0.05	0.023	mg/L	U H	UJ	H
Nitrate Nitrite as N	T	STL00217	0.023	0.05	0.023	mg/L	U H	UJ	H
Nitrite as N	T	14797-65-0	0.023	0.05	0.023	mg/L	U H	UJ	H

Analysis Method 351.2

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Nitrogen, Kjeldahl	T	STL00296	0.29	0.2	0.1	mg/L			

Analysis Method 4500 CN E-2011

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cyanide, Total	T	57-12-5	0.005	0.01	0.005	mg/L	U	U	

Analysis Method 4500 NH3 G-2011

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Ammonia	T	7664-41-7	0.1	0.25	0.1	mg/L	U	U	

Analysis Method 6010C

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Aluminum	T	7429-90-5	32000	200	24	ug/L			
Antimony	T	7440-36-0	6.3	20	5.3	ug/L	J	J	
Arsenic	T	7440-38-2	44	20	6.2	ug/L			
Barium	T	7440-39-3	1.7	10	1.7	ug/L	U	U	

Analysis Method 6010C

Beryllium	T	7440-41-7	13	4	0.1	ug/L		
Boron	T	7440-42-8	36	100	36	ug/L	U	U
Cadmium	T	7440-43-9	84	5	1	ug/L		
Calcium	T	7440-70-2	460000	5000	250	ug/L		
Chromium	T	7440-47-3	16	100	16	ug/L	U	U
Cobalt	T	7440-48-4	120	10	1	ug/L		
Copper	T	7440-50-8	7800	20	1.8	ug/L		
Iron	T	7439-89-6	120000	50	17	ug/L		
Lead	T	7439-92-1	39	100	39	ug/L	U	U
Magnesium	T	7439-95-4	31000	5000	330	ug/L		
Manganese	T	7439-96-5	42000	100	10	ug/L		
Molybdenum	T	7439-98-7	4.8	10	1	ug/L	J	J
Nickel	T	7440-02-0	64	40	2.1	ug/L		
Potassium	T	7440-09-7	3000	1000	17	ug/L		
Selenium	T	7782-49-2	9.9	20	9.9	ug/L	U	U
Silver	T	7440-22-4	0.6	10	0.6	ug/L	U	U
Sodium	T	7440-23-5	4800	10000	4800	ug/L	U	U
Strontium	T	7440-24-6	5900	10	0.9	ug/L		
Thallium	T	7440-28-0	60	250	60	ug/L	U	U
Tin	T	7440-31-5	5.5	50	5.5	ug/L	U	U
Titanium	T	7440-32-6	1.7	10	0.5	ug/L	J	J
Vanadium	T	7440-62-2	33	10	1	ug/L		
Zinc	T	7440-66-6	26000	20	7	ug/L		

Analysis Method 7470A

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Mercury	T	7439-97-6	0.08	0.2	0.08	ug/L	U	U	

Analysis Method 8082A

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
PCB-1016	T	12674-11-2	0.17	0.97	0.17	ug/L	U	U	
PCB-1221	T	11104-28-2	0.18	0.97	0.18	ug/L	U	U	
PCB-1232	T	11141-16-5	0.24	0.97	0.24	ug/L	U	U	
PCB-1242	T	53469-21-9	0.18	0.97	0.18	ug/L	U	U	
PCB-1248	T	12672-29-6	0.2	0.97	0.2	ug/L	U	U	
PCB-1254	T	11097-69-1	0.11	0.97	0.11	ug/L	U	U	
PCB-1260	T	11096-82-5	0.12	0.97	0.12	ug/L	U	U	

Analysis Method SM 3500 CR D

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
Cr (VI)	T	18540-29-9	0.014	0.01	0.003	mg/L	H	J-	H

Analysis Method SM 6200B

Sample Name CC06_092115_1300 **Matrix Type:** Water

Lab Sample Name: 680-117013-3 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	T	630-20-6	0.37	1	0.37	ug/L	U	U	
1,1,1-Trichloroethane	T	71-55-6	0.37	1	0.37	ug/L	U	U	
1,1,2,2-Tetrachloroethane	T	79-34-5	0.62	1	0.62	ug/L	U	U	
1,1,2-Trichloroethane	T	79-00-5	0.33	1	0.33	ug/L	U	U	
1,1-Dichloroethane	T	75-34-3	0.38	1	0.38	ug/L	U	U	
1,1-Dichloroethene	T	75-35-4	0.36	1	0.36	ug/L	U	U	
1,1-Dichloropropene	T	563-58-6	0.34	1	0.34	ug/L	U	U	
1,2,3-Trichlorobenzene	T	87-61-6	2.5	5	2.5	ug/L	U	U	
1,2,3-Trichloropropane	T	96-18-4	0.39	1	0.39	ug/L	U	U	
1,2,4-Trichlorobenzene	T	120-82-1	2.5	5	2.5	ug/L	U	U	
1,2,4-Trimethylbenzene	T	95-63-6	0.47	1	0.47	ug/L	U	U	
1,2-Dibromo-3-Chloropropane	T	96-12-8	1.1	5	1.1	ug/L	U	U	
1,2-Dibromoethane	T	106-93-4	0.44	1	0.44	ug/L	U	U	
1,2-Dichloroethane	T	107-06-2	0.5	1	0.5	ug/L	U	U	
1,2-Dichloroethene, Total	T	540-59-0	0.37	2	0.37	ug/L	U	U	
1,2-Dichloropropane	T	78-87-5	0.67	1	0.67	ug/L	U	U	
1,3,5-Trimethylbenzene	T	108-67-8	0.31	1	0.31	ug/L	U	U	
1,3-Dichloropropane	T	142-28-9	0.34	1	0.34	ug/L	U	U	
2,2-Dichloropropane	T	594-20-7	0.37	1	0.37	ug/L	U	U	
2-Butanone	T	78-93-3	3.4	10	3.4	ug/L	U	U	
2-Chloroethyl vinyl ether	T	110-75-8	5	10	5	ug/L	U	U	
2-Chlorotoluene	T	95-49-8	0.27	1	0.27	ug/L	U	U	
2-Hexanone	T	591-78-6	2	10	2	ug/L	U	U	
4-Chlorotoluene	T	106-43-4	0.45	1	0.45	ug/L	U	U	

Analysis Method SM 6200B

4-Methyl-2-pentanone	T	108-10-1	2.1	10	2.1	ug/L	U	U
Acetone	T	67-64-1	7	10	7	ug/L	U	U
Benzene	T	71-43-2	0.43	1	0.43	ug/L	U	U
Bromobenzene	T	108-86-1	0.5	1	0.5	ug/L	U	U
Bromochloromethane	T	74-97-5	0.45	1	0.45	ug/L	U	U
Bromodichloromethane	T	75-27-4	0.44	1	0.44	ug/L	U	U
Bromoform	T	75-25-2	0.43	1	0.43	ug/L	U	U
Bromomethane	T	74-83-9	2.5	5	2.5	ug/L	U	U
Carbon disulfide	T	75-15-0	1	2	1	ug/L	U	U
Carbon tetrachloride	T	56-23-5	0.33	1	0.33	ug/L	U	U
Chlorobenzene	T	108-90-7	0.26	1	0.26	ug/L	U	U
Chloroethane	T	75-00-3	2.5	5	2.5	ug/L	U *	U
Chloroform	T	67-66-3	0.5	1	0.5	ug/L	U	U
Chloromethane	T	74-87-3	0.4	1	0.4	ug/L	U	U
cis-1,2-Dichloroethene	T	156-59-2	0.41	1	0.41	ug/L	U	U
cis-1,3-Dichloropropene	T	10061-01-5	0.4	1	0.4	ug/L	U	U
Dibromochloromethane	T	124-48-1	0.32	1	0.32	ug/L	U	U
Dibromomethane	T	74-95-3	0.35	1	0.35	ug/L	U	U
Dichlorodifluoromethane	T	75-71-8	0.6	1	0.6	ug/L	U	U
Ethylbenzene	T	100-41-4	0.33	1	0.33	ug/L	U	U
Isopropylbenzene	T	98-82-8	0.35	1	0.35	ug/L	U	U
Methyl tert-butyl ether	T	1634-04-4	0.3	10	0.3	ug/L	U	U
Methylene Chloride	T	75-09-2	2.5	5	2.5	ug/L	U	U
m-Xylene & p-Xylene	T	179601-23-	0.35	1	0.35	ug/L	U	U
n-Butylbenzene	T	104-51-8	0.47	1	0.47	ug/L	U	U
N-Propylbenzene	T	103-65-1	0.38	1	0.38	ug/L	U	U
o-Xylene	T	95-47-6	0.23	1	0.23	ug/L	U	U
p-Isopropyltoluene	T	99-87-6	0.48	1	0.48	ug/L	U	U
sec-Butylbenzene	T	135-98-8	0.42	1	0.42	ug/L	U	U
Styrene	T	100-42-5	0.27	1	0.27	ug/L	U	U
tert-Butylbenzene	T	98-06-6	0.45	1	0.45	ug/L	U	U
Tetrachloroethene	T	127-18-4	0.74	1	0.74	ug/L	U	U
Toluene	T	108-88-3	0.48	1	0.48	ug/L	U	U
trans-1,2-Dichloroethene	T	156-60-5	0.37	1	0.37	ug/L	U	U
trans-1,3-Dichloropropene	T	10061-02-6	0.42	1	0.42	ug/L	U	U
Trichloroethene	T	79-01-6	0.48	1	0.48	ug/L	U	U
Trichlorofluoromethane	T	75-69-4	0.42	1	0.42	ug/L	U	U

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Vinyl acetate	T	108-05-4	0.81	2	0.81	ug/L	U	U
Vinyl chloride	T	75-01-4	0.5	1	0.5	ug/L	U	U
Xylenes, Total	T	1330-20-7	0.23	1	0.23	ug/L	U	U

Sample Name Trip Blank **Matrix Type:** Water

Lab Sample Name: 680-117013-4 **Sample Date:** 9/21/2015 1:00:00 PM

Analyte	Total/Dissolved	CAS No	Result Value	Reporting Limit	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Notes
1,1,1,2-Tetrachloroethane	T	630-20-6	0.37	1	0.37	ug/L	U	U	
1,1,1-Trichloroethane	T	71-55-6	0.37	1	0.37	ug/L	U	U	
1,1,2,2-Tetrachloroethane	T	79-34-5	0.62	1	0.62	ug/L	U	U	
1,1,2-Trichloroethane	T	79-00-5	0.33	1	0.33	ug/L	U	U	
1,1-Dichloroethane	T	75-34-3	0.38	1	0.38	ug/L	U	U	
1,1-Dichloroethene	T	75-35-4	0.36	1	0.36	ug/L	U	U	
1,1-Dichloropropene	T	563-58-6	0.34	1	0.34	ug/L	U	U	
1,2,3-Trichlorobenzene	T	87-61-6	2.5	5	2.5	ug/L	U	U	
1,2,3-Trichloropropane	T	96-18-4	0.39	1	0.39	ug/L	U	U	
1,2,4-Trichlorobenzene	T	120-82-1	2.5	5	2.5	ug/L	U	U	
1,2,4-Trimethylbenzene	T	95-63-6	0.47	1	0.47	ug/L	U	U	
1,2-Dibromo-3-Chloropropane	T	96-12-8	1.1	5	1.1	ug/L	U	U	
1,2-Dibromoethane	T	106-93-4	0.44	1	0.44	ug/L	U	U	
1,2-Dichloroethane	T	107-06-2	0.5	1	0.5	ug/L	U	U	
1,2-Dichloroethene, Total	T	540-59-0	0.37	2	0.37	ug/L	U	U	
1,2-Dichloropropane	T	78-87-5	0.67	1	0.67	ug/L	U	U	
1,3,5-Trimethylbenzene	T	108-67-8	0.31	1	0.31	ug/L	U	U	
1,3-Dichloropropane	T	142-28-9	0.34	1	0.34	ug/L	U	U	
2,2-Dichloropropane	T	594-20-7	0.37	1	0.37	ug/L	U	U	
2-Butanone	T	78-93-3	3.4	10	3.4	ug/L	U	U	
2-Chloroethyl vinyl ether	T	110-75-8	5	10	5	ug/L	U	U	
2-Chlorotoluene	T	95-49-8	0.27	1	0.27	ug/L	U	U	
2-Hexanone	T	591-78-6	2	10	2	ug/L	U	U	
4-Chlorotoluene	T	106-43-4	0.45	1	0.45	ug/L	U	U	
4-Methyl-2-pentanone	T	108-10-1	2.1	10	2.1	ug/L	U	U	
Acetone	T	67-64-1	7	10	7	ug/L	U	U	
Benzene	T	71-43-2	0.43	1	0.43	ug/L	U	U	
Bromobenzene	T	108-86-1	0.5	1	0.5	ug/L	U	U	
Bromochloromethane	T	74-97-5	0.45	1	0.45	ug/L	U	U	

Analysis Method SM 6200B

Bromodichloromethane	T	75-27-4	0.44	1	0.44	ug/L	U	U
Bromoform	T	75-25-2	0.43	1	0.43	ug/L	U	U
Bromomethane	T	74-83-9	2.5	5	2.5	ug/L	U	U
Carbon disulfide	T	75-15-0	1	2	1	ug/L	U	U
Carbon tetrachloride	T	56-23-5	0.33	1	0.33	ug/L	U	U
Chlorobenzene	T	108-90-7	0.26	1	0.26	ug/L	U	U
Chloroethane	T	75-00-3	2.5	5	2.5	ug/L	U *	U
Chloroform	T	67-66-3	0.5	1	0.5	ug/L	U	U
Chloromethane	T	74-87-3	0.4	1	0.4	ug/L	U	U
cis-1,2-Dichloroethene	T	156-59-2	0.41	1	0.41	ug/L	U	U
cis-1,3-Dichloropropene	T	10061-01-5	0.4	1	0.4	ug/L	U	U
Dibromochloromethane	T	124-48-1	0.32	1	0.32	ug/L	U	U
Dibromomethane	T	74-95-3	0.35	1	0.35	ug/L	U	U
Dichlorodifluoromethane	T	75-71-8	0.6	1	0.6	ug/L	U	U
Ethylbenzene	T	100-41-4	0.33	1	0.33	ug/L	U	U
Isopropylbenzene	T	98-82-8	0.35	1	0.35	ug/L	U	U
Methyl tert-butyl ether	T	1634-04-4	0.3	10	0.3	ug/L	U	U
Methylene Chloride	T	75-09-2	2.5	5	2.5	ug/L	U	U
m-Xylene & p-Xylene	T	179601-23-	0.35	1	0.35	ug/L	U	U
n-Butylbenzene	T	104-51-8	0.47	1	0.47	ug/L	U	U
N-Propylbenzene	T	103-65-1	0.38	1	0.38	ug/L	U	U
o-Xylene	T	95-47-6	0.23	1	0.23	ug/L	U	U
p-Isopropyltoluene	T	99-87-6	0.48	1	0.48	ug/L	U	U
sec-Butylbenzene	T	135-98-8	0.42	1	0.42	ug/L	U	U
Styrene	T	100-42-5	0.27	1	0.27	ug/L	U	U
tert-Butylbenzene	T	98-06-6	0.45	1	0.45	ug/L	U	U
Tetrachloroethene	T	127-18-4	0.74	1	0.74	ug/L	U	U
Toluene	T	108-88-3	0.48	1	0.48	ug/L	U	U
trans-1,2-Dichloroethene	T	156-60-5	0.37	1	0.37	ug/L	U	U
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Trichloroethene	T	79-01-6	0.48	1	0.48	ug/L	U	U
Trichlorofluoromethane	T	75-69-4	0.42	1	0.42	ug/L	U	U
Vinyl acetate	T	108-05-4	0.81	2	0.81	ug/L	U	U
Vinyl chloride	T	75-01-4	0.5	1	0.5	ug/L	U	U
Xylenes, Total	T	1330-20-7	0.23	1	0.23	ug/L	U	U